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PATENT

#2



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : George H. Beall and David L. Weidman  
Serial No. : 09/203,166  
Filed : December 1, 1998  
For : ATHERMAL OPTICAL DEVICE

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Commissioner of Patents and Trademarks  
Washington, D.C. 20231

CERTIFICATE OF MAILING

I hereby certify that the following correspondence attached hereto is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231, on the date below:

1. Information Disclosure Statement (3 pages)
2. Modified 1449 Form (4 pages)
3. Cited References (34 references)
4. Return Receipt Postcard (1 card)

Date Mailed:

January 11, 1999

1/11/99  
Date Signed

Maurice Klee  
Maurice M. Klee, Ph.D.



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INFORMATION DISCLOSURE STATEMENT

In accordance with 37 CFR §1.56 and 37 CFR §1.97(b)(1), applicants wish to call the Examiner's attention to the references listed on the Modified 1449 Form submitted herewith. Copies of these references are enclosed.

In general terms, the subject matter of the references is as follows:

- (a) References 1-5, 8, 12, 14, 19, 23-24, 26, 28-29, and 31-32 relate to  $\text{Li}_2\text{O}-\text{Al}_2\text{O}_3-\text{SiO}_2$  materials.
- (b) References 1, 4, 13-14, 17-19, 24, 26, and 30 disclose materials having a negative coefficient of thermal expansion, including  $\text{Li}_2\text{O}-\text{Al}_2\text{O}_3-\text{SiO}_2$  materials.
- (c) Reference 7 relates to the use of a crystallized glass, whose major crystalline component consists of  $\text{Li}_2\text{O}$ ,  $\text{Al}_2\text{O}_3$ , and  $\text{SiO}_2$ , to reinforce a joint between two lengths of optical fiber cable. The crystallized glass has a positive coefficient of thermal expansion substantially the same as that of the optical fibers.

See also Reference 9 which uses a  $\text{Li}_2\text{O}-\text{Al}_2\text{O}_3-\text{SiO}_2$  material for the same purpose and Reference 16 which uses a  $\text{Li}_2\text{O}-\text{Al}_2\text{O}_3-\text{SiO}_2$  material as a filler for an optical waveguide coupler.

- (d) Reference 6 relates to producing Bragg gratings in optical fibers.
- (e) References 10-11, 25, 27, and 33-34 relate to temperature stabilization of Bragg gratings in optical fibers and waveguides.
- (f) Reference 15 relates to using temperature to change the reflection wavelength of a Bragg grating in an optical fiber.

Various of these references were cited in one or more of the following related patent applications:

- (1) U.S. Application No. 08/785,336, filed January 16, 1997, and entitled ATHERMAL OPTICAL DEVICE;
- (2) International Application No. PCT/US96/13062, filed August 7, 1996, entitled ATHERMAL OPTICAL DEVICE, and published as International Publication No. WO 97/26572 on July 24, 1997; and
- (3) International Application No. PCT/US97/00982, filed January 16, 1997, entitled ATHERMAL OPTICAL DEVICE, and published as International Publication No. WO 97/28480 on August 7, 1997.

Copies of the above PCT applications, along with their international search reports, are submitted herewith. The pending '336 application corresponds to PCT application number PCT/US97/00982.

The present application was filed for the purpose of provoking an interference with Fleming et al., U.S. Patent No. 5,694,503, which is assigned to Lucent Technologies, Inc. A copy of the '503 patent is enclosed.

The foregoing references are being submitted prior to the mailing date of a first substantive Office Action for this application and thus no petition or fee under 37 CFR §1.97 and 37 CFR §1.17(p) is believed to be due for this submission. However, if a petition is required, applicants request that this be considered to be such and that any required fee be charged to Deposit Account No. 11-1158.

The Examiner is respectfully requested to initial a copy of the Modified 1449 Form and return it to applicants to indicate consideration of the references listed thereon in connection with the prosecution of this application.

Respectfully submitted,

Date: \_\_\_\_\_

1/11/99

Maurice Klee

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